

Application Number 09/755,714
Responsive to Final Office Action mailed June 21, 2006

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Previously presented): A portable RFID reader for use in interrogating RFID tags associated with items, comprising:

- (a) an RFID interrogation source that interrogates a plurality of items located within an interrogation area, wherein the plurality of items includes at least one item of interest;
- (b) an antenna;
- (c) a processor that determines a location of the item of interest within the interrogation area based on the interrogated plurality of items;
- (d) a display; and
- (e) a user interface in which a representation of the interrogation area is

shown on the display as a first graphical component of the user interface, and a representation of the item of interest is shown on the display as a second graphical component of the user interface relative to the first graphical component to indicate the location of the item of interest within the interrogation area,

wherein the RFID interrogation source is coupled to the processor, the antenna is coupled to either the RFID interrogation source or the processor, and the processor is coupled to the display.

Claims 2-3 (Cancelled).

Claim 4 (Original): The portable RFID reader of claim 1, wherein the processor and display are components of a hand-held computer.

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Claim 5 (Original): The portable RFID reader of claim 1, wherein the display may be activated by touch.

Claim 6 (Original): The portable RFID reader of claim 1, wherein the user interface further includes text associated with the item of interest may be presented on the display for observation by a user.

Claim 7 (Original): The portable RFID reader of claim 1, wherein the user interface further includes at least one audio signal for providing information to the user.

Claim 8 (Original): The portable RFID reader of claim 7, wherein the audio signal is provided each time an RFID tag is interrogated.

Claim 9 (Original): The portable RFID reader of claim 7, wherein the audio signal is only provided when the RFID tag of an item meeting a predetermined criterion is interrogated.

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Claim 10 (Previously presented): A portable RFID reader for use in interrogating RFID tags associated with items of interest, comprising:

(a) an RFID interrogation source that interrogates a plurality of items located within an interrogation area, wherein the plurality of items includes at least one item of interest;

(b) an antenna;

(c) a processor that determines a location of the item of interest within the interrogation area based on the interrogated plurality of items;

(d) a display; and

(e) a user interface in which a representation of the interrogation area is shown on the display as a first graphical component of the user interface, and the item of interest is shown on the display as a second graphical component of the user interface relative to the first graphical component to indicate the location within the interrogation area,

wherein the RFID interrogation source is coupled to the processor, the antenna is coupled to either the RFID interrogation source or the processor, and the processor is coupled to the display,

wherein the user interface further includes at least one audio signal for providing information to the user, wherein the audio signal is only provided when the RFID tag of an item meeting a predetermined criterion is interrogated, and wherein the predetermined criterion is selected from a group consisting of:

(a) a specific RFID tag associated with an item of interest;

(b) an RFID tag that is out of order relative to the RFID tag of at least one adjacent item; and

(c) a class of items to which the item of interest belongs.

Claim 11 (Original): The portable RFID reader of claim 10, wherein the criterion in response to which the audio signal is provided may be presented on the display for observation by a user.

Claim 12 (Original): The portable RFID reader of claim 1, wherein the user interface further includes at least one light for providing information to the user.

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Claim 13 (Original): The portable RFID reader of claim 12, wherein at least one light is illuminated each time an RFID tag is interrogated.

Claim 14 (Original): The portable RFID reader of claim 12, wherein the light is only illuminated when the RFID tag of an item meeting a predetermined criterion is interrogated.

Claim 15 (Previously presented): A portable RFID reader for use in interrogating RFID tags associated with items of interest, comprising:

(c) an RFID interrogation source that interrogates a plurality of items located within an interrogation area, wherein the plurality of items includes at least one item of interest;

(d) an antenna;

(c) a processor that determines a location of the item of interest within the interrogation area based on the interrogated plurality of items;

(d) a display; and

(e) a user interface in which a representation of the interrogation area is shown on the display as a first graphical component of the user interface, and the item of interest is shown on the display as a second graphical component of the user interface relative to the first graphical component to indicate the location within the interrogation area, wherein the RFID interrogation source is coupled to the processor, the antenna is coupled to either the RFID interrogation source or the processor, and the processor is coupled to the display, wherein the user interface further includes at least one light for providing information to the user, wherein the light is only illuminated when the RFID tag of an item meeting a predetermined criterion is interrogated, and wherein the predetermined criterion is selected from a group consisting of:

(a) a specific RFID tag associated with an item of interest;

(b) an RFID tag that is out of order relative to the RFID tag of at least one adjacent item; and

(c) a class of items to which the item of interest belongs.

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Claim 16 (Original): The portable RFID reader of claim 15, wherein the criterion in response to which the at least one light is illuminated may be presented on the display for observation by a user.

Claim 17 (Cancelled).

Claim 18 (Previously presented): A portable RFID reader for use in interrogating RFID tags associated with items of interest, comprising:

- (e) an RFID interrogation source that interrogates a plurality of items located within an interrogation area, wherein the plurality of items includes at least one item of interest;
- (f) an antenna;
- (c) a processor that determines a location of the item of interest within the interrogation area based on the interrogated plurality of items;
- (d) a display; and
- (e) a user interface in which a representation of the interrogation area is

shown on the display as a first graphical component of the user interface, and the item of interest is shown on the display as a second graphical component of the user interface relative to the first graphical component to indicate the location within the interrogation area, wherein the first graphical component is a bar, and the second graphical component is a portion of the bar, and wherein the RFID interrogation source is coupled to the processor, the antenna is coupled to either the RFID interrogation source or the processor, and the processor is coupled to the display.

Claim 19 (Previously presented): The portable RFID reader of claim 1, wherein the first graphical component is a group of icons, and the second graphical component is one of the icons of the series, in which the one icon is visually differentiated from the remainder of the icons.

Claim 20-21 (Cancelled)

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Claim 22 (Previously presented): An RFID reader comprising:

- (a) an RFID interrogation source that interrogates a plurality of items located within an interrogation area, wherein the plurality of items includes at least one item of interest;
- (b) a processor that determines a location of the item of interest within the interrogation area based on the interrogated plurality of items;
- (c) a display; and
- (d) a user interface in which a representation of the interrogation area is shown on the display as a first graphical component of the user interface, and a representation of the item of interest is shown on the display as a second graphical component of the user interface relative to the first graphical component to indicate the location of the item of interest within the interrogation area and which an audio signal is produced when the RFID reader interrogates an RFID tag associated with a predetermined location, wherein the RFID interrogation source is coupled to the processor and the processor is coupled to the display.

Claim 23 (Currently Amended): An RFID reader comprising:

- (a) an RFID interrogation source that interrogates a plurality of items located within an interrogation area, wherein the plurality of items includes at least one item of interest;
- (b) a processor that determines a location of the item of interest within the interrogation area based on the interrogated plurality of items;
- (c) a display; and
- (d) a user interface in which a representation of the interrogation area is shown on the display as a first graphical component of the user interface, and a representation of the item of interest is shown on the display as a second graphical component of the user interface relative to the first graphical component to indicate the location of the item of interest within the interrogation area, and in which an audio signal is produced repeatedly at a desired interval to pace a user as to the speed at which RFID tags should be interrogated by the interrogation source, wherein the RFID interrogation source is coupled to the processor and the processor is coupled to the display.

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Claim 24 (Previously presented): An RFID reader comprising:

(a) an RFID interrogation source that interrogates a plurality of items located within an interrogation area, wherein the plurality of items includes at least one item of interest;
(b) a processor that determines a location of the item of interest within the interrogation area based on the interrogated plurality of items;
(c) a display; and
(d) a user interface in which a representation of the interrogation area is shown on the display as a first graphical component of the user interface, and a representation of the item of interest is shown on the display as a second graphical component of the user interface relative to the first graphical component to indicate the location of the item of interest within the interrogation area and including at least one light that is illuminated when an RFID tag is interrogated, wherein the RFID interrogation source is coupled to the processor and the processor is coupled to the display.

Claim 25 (Original): The RFID reader of claim 24, wherein the light is illuminated only when an RFID tag associated with a specific material of interest is interrogated.

Claim 26 (Original): The RFID reader of claim 24, wherein at least one light remains illuminated while RFID tags are being interrogated, and at least one other light is illuminated only when an RFID tag associated with an item meeting a predetermined criterion is illuminated.

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Claim 27 (Previously presented): An RFID reader comprising:

(a) an RFID interrogation source that interrogates a plurality of items located within an interrogation area, wherein the plurality of items includes at least one item of interest;
(b) a processor that determines a location of the item of interest within the interrogation area based on the interrogated plurality of items;
(c) a display; and
(d) a user interface in which a representation of the interrogation area is shown on the display as a first graphical component of the user interface, and the item of interest is shown on the display as a second graphical component of the user interface relative to the first graphical component to indicate the location within the interrogation area and including at least one light that is illuminated when an RFID tag is interrogated, wherein the user interface includes more than one light, and the lights are illuminated sequentially as the RFID reader approaches a desired location or material of interest, wherein the RFID interrogation source is coupled to the processor and the processor is coupled to the display.

Claims 28-30 (Cancelled)

Claim 31 (Previously presented): An RFID reader comprising:

(a) an RFID interrogation source that interrogates an item;
(b) a processor that determines a number of intermediate items located between the interrogated item and an item or location of interest;
(c) a display; and
(d) a user interface that displays an indication in a measurable unit of how far away the item or location of interest is from the interrogated item based on the determined number of intermediate items, wherein the RFID interrogation source is coupled to the processor and the processor is coupled to the display.

Claim 32 (Original): The RFID reader of claim 31, wherein the measurable unit is a number of items.

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Claim 33 (Previously presented): The RFID reader of claim 31, wherein the RFID reader accounts for missing intermediate items between the item or location of interest and the interrogated item when the indication is displayed by using the processor to reference a database to determine how many of the intermediate items are expected to be present.

Claims 34-38 (Cancelled).

Claim 39 (Previously presented): The RFID reader of claim 33, wherein the database is located within the RFID reader.

Claim 40 (Previously presented): The RFID reader of claim 33, wherein the database is located external to the RFID reader.